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NEW GENERA AND SPECIES OF NEOTROPICAL, PHYSOGASTRIC TERMITOPHILES. (STAPHYLINIDAE: ALEOCHARINAE)

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The new species of Staphylinidae described in this paper represent a part of the collection of termite guests made by Mr. Wolfgang Von Hagen in Ecuador. Six of the new species of this collection were described in an earlier paper (1937). The types are deposited in The American Museum of Natural History.

The species described below are allied to *Termitogaster* Casey and in the present state of the genus could probably be assigned to that group. However, in *Termitogaster* are included species which resemble the type species, *T. insolens* Casey, in only a few characteristics. Some of them differ very markedly in important morphological characters which in many groups of Coleoptera would be used to separate categories higher than the genus. I have recently placed a southwestern United States species, *texanus* Brues, into a new genus, *Eburniogaster*, and now propose to separate two other very distinct species into a new genus, *Termitosomus*. The five remaining species of *Termitogaster* seem to be similar enough to warrant leaving them together, although they differ considerably in some respects. In the generic description that follows, these variations are indicated.

Two of the new Ecuadorian species are assigned to new genera as they are not congeneric with the species of *Termitogaster* as now defined. The third new species belongs to *Trachopeplus* Mann. This genus was erected for a British Guiana species, *T. setosus* Mann, which occurs with a species of termite, *Nasutitermes* (*N.*) *acajutlae* (Holmgren), very closely allied to the host, *Nasutitermes* (*N.*) *pilifrons* (Holmgren), of the new species.

Holotypes and a series of the paratypes of the new species of the Von Hagen collection are deposited in The American Museum of Natural History. This includes *Trachopeplus disjunctipennis*, *Termitoides marginatus*, and *Neotermitogaster colonus* described in this paper, and *Termitogaster impressicollis*, *Termitogaster bicolor*, *Termitophya ecuadoriensis*, *Termitophya inornata*, *Abroteles bisetosus*, and *Perinthus hageni* described in 1937. The remainder of the paratypes are in the collection of the author.

The author wishes to express appreciation to Mr. Von Hagen and to Dr. F. E. Lutz of The American Museum for the opportunity of studying this material. I am indebted to Dr. A. E. Emerson for the identification of the termites with which these beetles were associated.

TERMITOGASTER CASEY

CASEY, 1889, Ann. N. Y. Acad. Sci., IV, p. 63.

T. insolens CASEY (type), ibid., p. 65. Panama (Casey); Barro Colorado Island, C. Z. (coll. by A. Emerson). Host: *Nasutitermes* (*N.*) *corniger* (Motschulsky).

T. brevis MANN, 1923, Zoologica, III, p. 344. British Guiana, Trinidad. Host: *N.* (*N.*) *costalis* (Holmgren).

T. emersoni MANN, ibid., p. 342. British Guiana, Trinidad. Host: *N.* (*N.*) *ephratae* (Holmgren).

T. impressicollis SEEVERS, 1937, Ann. Ent. Soc. Amer., XXX, p. 11. Ecuador. Host: *N.* (*N.*) *peruanus* (Holmgren).

T. bicolor SEEVERS, ibid., p. 12. Ecuador. Host: *N.* (*N.*) *dendrophilus* (Holmgren).

Head moderate in size, very slightly narrowed behind the eyes; sides arcuate. Eyes well developed, moderately convex, finely facetted, rounded, subtruncate anteriorly, more pointed behind.

Antennae slender, anteriorly and flexibly geniculate, inserted in rounded apertures on the front, almost adjoining the antero-superior margin of the eye. All of the joints loosely articulated and subcylindrical; basal joint

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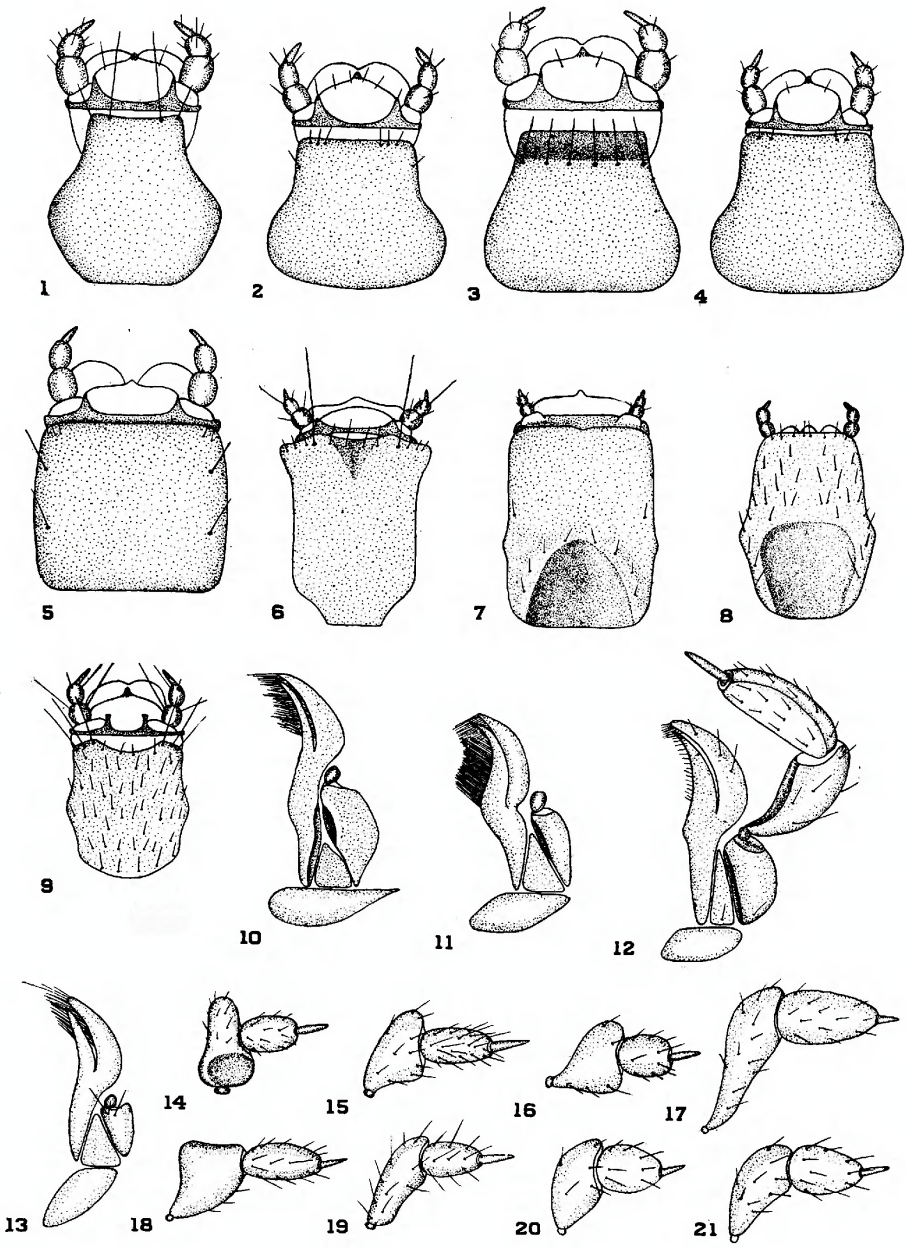


FIGURES 1 TO 21

1, *Termitogaster insolens* Casey, labium. 2, *Termitogaster impressicollis* Seevers (and *T. bicolor* Seevers), labium. 3, *Termitogaster emersoni* Mann, labium. 4, *Termitogaster brevis* Mann, labium. 5, *Trachopeplus disjunctipennis* n. sp., labium. 6, *Termitoides marginatus* n. sp., labium. 7, *Termitosomus simulans* (Mann), labium. 8, *Termitosomus fissipennis* (Casey), labium. 9, *Neotermitogaster colonus* n. sp., labium. 10, *Termitogaster insolens* Casey, maxilla. 11, *Neotermitogaster colonus* n. sp., maxilla. 12, *Termitoides marginatus* n. sp., maxilla. 13, *Trachopeplus disjunctipennis* n. sp., maxilla. 14, *Termitogaster insolens* Casey, maxillary palpus. 15, *Termitogaster impressicollis* Seevers (also *T. emersoni* Mann), maxillary palpus. 16, *Termitogaster brevis* Mann, maxillary palpus. 17, *Trachopeplus disjunctipennis* n. sp., maxillary palpus. 18, *Termitoides marginatus* n. sp., maxillary palpus. 19, *Neotermitogaster colonus* n. sp., maxillary palpus. 20, *Termitosomus fissipennis* (Casey), maxillary palpus. 21, *Termitosomus simulans* (Mann), maxillary palpus.

(The unstippled parts of the labium are membranous.)

elongate, almost as long as the next three together; second distinctly longer than wide, a little shorter than the third (subequal in *emersoni*, longer in *brevis*) and longer than the fourth; five to ten slightly shorter, decreasing gradually in length, the latter about as long as wide; eleventh as long as the two preceding together, conoidal and obtusely pointed at apex. Front (postclypeus) moderately long, truncate; anteclypeus membranous, short, anterior border slightly concave. Labrum (Fig. 26) large, anterior three-fifths membranous; anterior border sinuate at apex, emarginate medially, anterior angles rounded.

Mentum and submentum fused into a large, nearly flat, thin, smooth and polished sclerite. The shape of this piece varies somewhat in the different species (Figs. 1–4), but in general is wide at the base and much narrower apically, and varies in the curvature of the sides and angles, and in the arrangement of the setae.

Prementum feebly chitinized in part, this consisting of a transverse bar to which the palpiger is attached. Ligula in some species with a small rounded chitinous projection; paraglossae not differentiated from glossae. The large, membranous bilobed structure shown in association with labium in the figures is apparently the hypopharynx, although it may represent the paraglossal lobes. Labial palpi three-jointed; basal joint usually stouter than the second joint; the third joint slender, but not much shorter than the preceding joint, subulate.

Gula (Fig. 22) moderately broad apically, sides nearly parallel except basally where the posterior angles are drawn out into long processes, the base thus being more than twice as wide as the apex.

Maxillae large, the galea and lacinia moderately slender, ciliated. Cardo variable in form, that of *insolens* (Fig. 10) being produced laterally as a fine pointed structure visible when the head is viewed from above. There is a suggestion of a lateral prolongation of the cardo in *brevis*, but in the others it is triangular, not prolonged, and not visible from above. Maxillary palpi four-jointed, basal joint minute; second large, variable in shape in the different species (Figs. 14–16), inner face concave, outer face convex; second joint strongly transverse; third joint much narrower, somewhat oval; fourth joint slender, subulate.

Mandibles (Fig. 33) slender, feebly arcuate, acute; with a small acute tooth near the tip and a larger rounded tooth about in the middle (except in *emersoni* which has three small teeth near the middle and no subapical tooth).

Pronotum moderately large, robustly constructed, convex, transverse, all sides nearly straight, angles rounded. Surface of pronotum irregular; in *insolens*, *brevis* and *emersoni* the surface has several shallow impressions and deeper pits; in *impressicollis* it is broadly impressed and has numerous irregularities; and in *bicolor* the entire disc is flattened and relatively smooth. Elytra considerably shorter than pronotum, connate, posterior border rather broadly and deeply concave.

Legs slender, rather long, coarsely setose. Tibiae without terminal spurs. Tarsi cylindrical, moderate in length, sparsely setose, compressed throughout, five-jointed on all legs, the fourth joint anchylosed with the fifth. Basal joint of the anterior legs subequal to joints two and three (shorter in *impressicollis* and *emersoni*); basal joint longer than the following two joints on the remaining legs; joints four and five together as long as the two preceding joints (except on the posterior legs of *bicolor* and *emersoni*). Claws small, slender, strongly arcuate, with a small, vertical, obtusely pointed tooth near the base.

Abdomen strongly dilated, in great part membranous. Tergites subequal in length, strongly transverse. Inner paratergites, which form the feebly reflexed margins, triangular, fifth strongly attenuated, posterior half very slender. The sides of the abdomen consisting of tumid white membrane with very slender oblique outer paratergites, the fifth of which is so reduced as to be easily overlooked. Venter convex. The sides of the second to fourth sternites are deeply and broadly incised (Fig. 27), the apex of the incision appearing at the juncture of the articulating surface of the sternite and the free surface.

TERMITOSOMUS, NEW GENUS

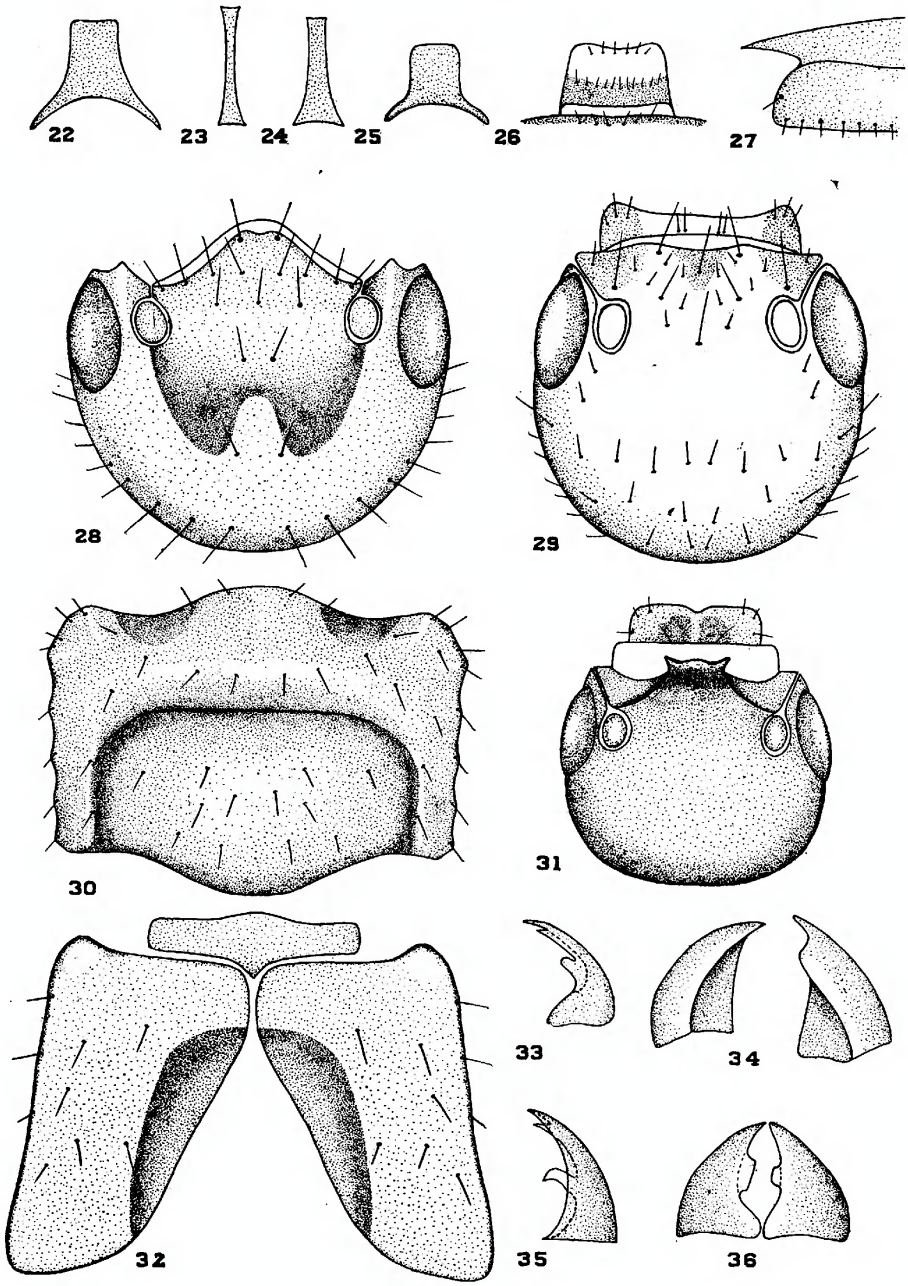
T. fissipennis (CASEY), type, 1890, Ann. N. Y. Acad. Sci., V, p. 187. Panama (Casey), Barro, Colorado Island, C. Z. (A. Emerson). Host: *Nasutitermes* (*N.*) *corniger* (Motschulsky).

Synonym; *Termitogaster simopelta* MANN, 1923, Zoologica, III, p. 341. SEEVERS (*fissipennis* = *simopelta*), 1937, Ann. Ent. Soc. Amer., 30, p. 14. British Guiana. Host: *N.* (*N.*) *costalis* (Holmgren).

T. simulans (MANN), 1923, Zoologica, III, p. 338. British Guiana. Host: *N.* (*N.*) *octopilis* Banks.

Anterior parts slender, compactly jointed, parallel and subcylindrical; abdomen strongly inflated. Head scarcely as long as wide, deflexed slightly, sides short and parallel; basal angles narrowly rounded; base subtruncate, broadly arcuate, neck very wide; upper surface covered rather sparsely with minute subasperate points; very feebly convex, broadly and feebly impressed in the middle.

Eyes rather large, almost evenly oval, slightly longer than wide, convex and distinctly prominent, finely facetted. Antennae strongly geniculate, two-fifths as long as the body, rather slender, cylindrical, loosely articulated. Antenna of *fissipennis* with first joint equal to the three following; joints two and three subequal in length, fourth joint a trifle more than half as long as the preceding; 4–10 very similar, perhaps decreasing slightly in length; ninth as long as wide, tenth slightly transverse, eleventh cylindro-ovoidal, pointed, as long as the two preced-



FIGURES 22 TO 36

22, *Termitogaster insolens* Casey, gula. 23, *Termitosomus fissipennis* (Casey), gula. 24, *Termitosomus simulans* (Mann), gula. 25, *Trachopeplus disjunctipennis* n. sp., gula. 26, *Termitogaster insolens* Casey, labrum. 27, *Termitogaster insolens* Casey, lateral border of the second abdominal sternite. 28, *Trachopeplus disjunctipennis* n. sp., head. 29, *Neotermitogaster colonus* n. sp., head. 30, *Trachopeplus disjunctipennis* n. sp., pronotum. 31, *Termitoides marginatus* n. sp., head. 32, *Trachopeplus disjunctipennis* n. sp., elytra and scutellum. 33, *Termitogaster insolens* Casey, right mandible. 34, *Trachopeplus disjunctipennis* n. sp., mandibles. 35, *Termitoides marginatus* n. sp., right mandible. 36, *Neotermitogaster colonus* n. sp., mandibles.

ing. That of *simulans* differs in having the basal joint longer than the next three together, and in that the second joint is elongate so that the third joint is only about four-sevenths as long, and the fourth joint less than half as long as two. There is a gradual decrease in length of joints four to ten.

The front (postclypeus) of the head is considerably different in the two species. In *fissipennis*, the front before the antennae is advanced and strongly arcuate at the apex, the surface just before the apical margin elevated in two broad, approximate, cariniform tubercles, immediately in front of which the surface is very short and strongly declivous, the apical margin with a deep, medial, rounded emargination, having the sides in the form of fine carinae and with apical projections extremely fine and acute, but not greatly advanced. In *simulans*, the head is widest at the occipital border. The front (postclypeus) is advanced and strongly arcuate at the apex, the surface being elevated into a transverse ridge before the antennae, and then rather steeply declivous to the apical border which is feebly emarginate medially. The vertex of the head is somewhat concave on either side and longitudinally convex medially.

Labrum transverse, broadly and rather strongly emarginate at apex, with the surface strongly impressed medially; the labrum is largely membranous, only a short basal area being moderately heavily sclerotized. Labrum separated from the postclypeus by the membranous anteclypeus.

Mentum and submentum forming a single sclerite which is longer than wide; in *fissipennis* (Fig. 8) it is widest behind the middle, and the sides are sinuate in front and behind; in *simulans* (Fig. 7) the sides are nearly parallel. The surface is broadly impressed behind the middle in both species. Ligula very short, membranous; paraglossae evidently not lobed. Labial palpi very small, second joint slightly smaller than first, third much more slender.

Maxillae rather large; the cardo triangular, with angles broadly rounded, not produced laterally nor medially. Galea well developed, lunate, corneus, with apex acute, inner edge fringed with setae, lacinia more slender, tip more acutely produced. Maxillary palpi large, conspicuous; basal joint small; second and third joints convex on outer sides, excavated on the inner; second joint asymmetric (Figs. 20–21), third joint longer than wide, ovoidal, strongly transverse, fourth small and spiniform.

Gula (Figs. 23, 24) very slender, widest at base, narrowed in middle, wider again apically. The structure of the mandibles of *fissipennis* not determined; those of *simulans* with a moderately large, subapical tooth.

Pronotum slightly wider than head, transverse; sides nearly parallel, converging slightly posteriorly in *simulans;* apex broadly and strongly arcuate and rounded into the sides; base truncate in *fissipennis*, base arcuate in *simulans* with a shallow concavity in middle and sinuations lateral to this. Surface of pronotum feebly, evenly convex, not impressed.

Prosternum very short; elevated medially into an acute tubercle near the anterior border in *fissipennis*, broadly elevated in *simulans* but not tuberculate or carinate.

Elytra equal in length and basal width to the pronotum; sides straight and parallel, each elytron distinct, the two separated by an interval which at the apex is equal to their own width, the sides of the intervals straight and feebly convergent anteriorly, abruptly terminating at a point just behind the scutellum, where it is about one-half as wide as at apex. Elytra of *simulans* differing from *fissipennis* in having the posterior margin concave, and in being less widely separated posteriorly. Hind wings vestigial.

Anterior coxae very long, loosely attached in the large membranous cavities; anterior femora long, upper edge strongly arcuate, tibiae as long as femora, coarsely and densely setose within, and with two external rows of long slender widely spaced setiform spines. Middle coxae very large, oblique, contiguous; trochanters moderate, with a short obtuse dentiform process ventrally; femora rapidly narrowed near point of attachment to trochanters, middle tibiae similar to anterior ones. Posterior coxae with inner portion large, porrect, contiguous, longer than wide, truncate at apex; trochanters large; femora very irregular in *fissipennis*, upper edge broadly angulate just behind the middle, the edge then broadly incurvate in circular segment to point of attachment, tibiae similar to others. Hind femora of *simulans* unmodified.

Tarsi five-jointed, rather long, slightly compressed; first joint approximately as long as remainder (slighly shorter in anterior) in *fissipennis*, shorter than remainder in *simulans*. Fourth joint anchylosed to fifth. Abdomen with six segments widely inflated, somewhat wider than thorax and head. Abdomen compressed laterally, sides almost straight, so that abdomen is much thicker dorso-ventrally. Abdomen permanently fixed in a horizontal position, not capable of being curved over thorax and head. Integument in greater part chitinous, white membranous portions but slightly exposed. Dorsum and venter both strongly convex. Inner paratergites moderately large, outer ones much more slender, rod-like.

Termitosomus has few characteristics in common with *Termitogaster*. The species of this genus differ from those of the latter genus in the shape of the mentum-submentum, the minuteness of the labial palpi, the form of the maxillary palpi, the very narrow gula, the form of the head, pronotum and elytra, the structure of the abdomen and the form of the trochanters and femora. Only the antennae and tarsi serve to indicate relationship between the two genera.

The elytra are very unusual in this genus and are paralleled only by those of *Trachopeplus* (Fig. 32), a new species of which is described below. The similarity in elytral structure in these two genera is not extended to many other characteristics, however.

Trachopeplus disjunctipennis, new species

Length, 3.0–3.5 mm.

Color of head, thorax and elytra dark brown; abdominal sclerites and legs lighter reddish brown, the abdomen darker apically. Membranous portion of abdomen white. Body rather heavily clothed with very stout, black setae, and a very few fine pale hairs on the abdominal sclerites.

Head, pronotum and elytra very minutely punctate with dense regularly arranged punctures. Microscopically pubescent. Chaetotaxy of the head as follows: postclypeus with thirteen setae as shown in figure 28. Front with a pair, vertex with two, and occiput with a row which continues on to the side of the head and below the eyes. The arrangement of the setae on pronotum and elytra is shown in figures 30 and 32. The pilosity of the abdomen as follows: first tergite with eight black setae and a few pale ones along the posterior border; tergites 2–5 with an apical row of nine and a subapical row of eight stout setae (decreasing in length medially) and ten pale hairs on the apical border; sixth tergite with six apical setae and eight in a transverse row midway between borders; seventh tergite with an apical row of six and middle row of four. First four inner paratergites with three stout setae, the fifth with two; the five outer paratergites with 3, 4, 3, 3, 1 setae, respectively. (This number may vary slightly.) The sternites with three or four rows of stout black setae, the apical row of about two dozen setae.

Head rather short, wider than long. Postclypeus strongly produced, anterior border arcuate, slightly notched medially. Front slightly elevated between the antennal fossae, postclypeus feebly declivous. Anteclypeus membranous, moderately long, strongly arcuate. Labrum weakly sclerotized, bent down and back as to be almost completely concealed by the clypeus. The detailed structure of the labrum not made out. Vertex of head with broad, shallow, lateral impressions from the antennal fossae to near the median line where they connect anteriorly. Eyes nearly circular in shape, very slightly longer than wide, finely facetted.

Antennae geniculate. Scape elongate, somewhat longer than the three following joints together, scape gradually wider apically, being twice as wide at apex as at the base. Second joint much wider apically, subconical; joints 3–10 cylindrical, third longer than the others, joints 4–7 subequal, joints 8–10 subequal and slightly shorter and narrower than the preceding; terminal joint slightly longer than two preceding joints together, slightly attenuated at tip.

Mandibles (Fig. 34) stout, with acute tips. Left mandible simple, right one with inner border emarginate near apex so that a broad rounded process is formed.

Mentum and submentum (Fig. 5) fused into a quadrate sclerite; sides slightly arcuate. Surface moderately convex, anterior one-fourth rather strongly declivous; densely punctate and bearing several pairs of setae. Prementum feebly sclerotized, ligula membranous, feebly represented as a small projection between the paraglossae. Palpigers feebly sclerotized. Palpi three-jointed, first joint elongate, second joint about three-fourths as long, third joint slender, slightly shorter than second. Gula (Fig. 25) short, very little longer than wide, posterior angles strongly produced.

Cardo of maxilla large, triangular (Fig. 13). Medial sclerite of stipes large, triangular. Lacinia slender, with a slender, pointed tip, with some setae. Galea longer than lacinia with a dense brush of setae on broad apical border. Maxillary palpi four-jointed (Fig. 17). First joint small, second joint very narrow basally, much wider at apex, inner side concave, third joint large, broad basally, sides narrowing apically, fourth joint small, subulate.

Pronotum (Fig. 30) approximately three-fourths as long as wide. Anterior and posterior borders bisinuate, posterior border more strongly arcuate medially. Anterior angles truncated; sides almost parallel, feebly emarginate between each setae so as to appear weakly scalloped. Posterior angles feebly truncated. Surface of pronotum with a broad, deep impression in front of the middle, which is continued to the basal border as a more shallow impression. Area enclosed by this impression is convex. Anteriorly, surface with a shallow depression on each side at apical border.

Scutellum strongly transverse, posterior border produced medially. Elytra (Fig. 32) wider than long; longer than pronotum. Elytra contiguous basally for a short distance, the medial borders then diverging so that the apices are widely separated. Surface shallowly concave along the medial border. Hind wings vestigial.

Abdomen with five segments greatly distended (physogastric), similar in shape to that of *Termitogaster*. Sclerites separated by membranous material but not to a marked degree. Dorsum only slightly convex, venter strongly so. First five tergites gradually increasing in length, fifth almost twice as long as fourth, considerably narrower posteriorly, sixth slightly shorter, arcuate posteriorly. Sternites proportional in size to tergites.

Margin of upper surface formed by paratergites which are not elevated. Inner paratergites moderate in size, first and fifth elongate, triangular, others rectangular. Outer paratergites

smaller, first three triangular, fourth oval, fifth very small, oval.

Legs moderately long, strongly setose. Coxae and trochanters large, anterior coxae contiguous, others slightly separated. Femora and tibiae rather broad, compressed; anterior femora a little wider and more compressed than the middle ones, sides nearly straight in both. Posterior femora with outer border arcuate, inner border very broadly and bluntly toothed medially. All femora grooved for the partial reception of the tibiae. Tibiae and femora subequal in length.

Tarsi five-jointed, fourth joint anchylosed to fifth. Anterior tarsi with basal joint a little longer than the second; basal joint of middle tarsi elongate but considerably shorter than remaining joints together; first joint of posterior tarsi as long as remainder; second joint of all tarsi subequal to four and five together. Tarsal claws with short basal tooth.

HOST.—*Nasutitermes* (*N.*) *pilifrons* (Holmgren).

The holotype and one paratype were collected at El Coco (near Bolivar), Ecuador, on May 5, 1935 (Wolfgang Von Hagen collection, No. 92).

T. disjunctipennis differs from *setosus* Mann in the following respects: the postclypeus (front) is much more strongly produced and arcuate, and is slightly emarginate medially; the pronotum has truncate anterior and posterior angles, shallow depressions near the anterior border, sides with sinuations between the bristles, and the transverse impression in the middle is continued to the basal border; and in the arrangement of the bristles on the body.

TERMITOIDES, NEW GENUS

GENOTYPE.—*Termitoides marginatus*, new species.

Head (Fig. 31) approximately as wide as long, somewhat deflexed; basal angles rounded, occiput feebly convex, vertex and front slightly impressed. Front (postclypeus) elevated medially into a broad, acute process which extends above and beyond apical border of postclypeus. Anterior face of process posteriorly inflexed. Postclypeus lateral to process is depressed somewhat, and the apical border is broadly emarginate.

Anteclypeus moderately long, transverse, with apical border nearly straight; labrum slightly longer than anteclypeus and feebly sclerotized medially, apical border with a median notch. Mandibles (Fig. 35) slender; with a moderately strong subapical tooth, and a larger tooth with a slightly hooked tip below the middle.

Antennae moderately slender, cylindrical, strongly geniculate. Basal joint longer than the three following together, gradually thickened apically. Joints 2–6 gradually decreasing in length and increasing slightly in width, so that while the second is nearly twice as long as wide, the sixth is slightly wider than long. Joints six and seven subequal, and eight to ten subequal also but slightly shorter than the preceding; terminal segment cylindro-ovoidal, pointed, as long as two preceding together.

Mentum and submentum (Fig. 6) fused together; apical border shallowly concave medially, and obliquely sinuatotruncate laterally. Sides narrowed rather abruptly just behind the anterior angles, then parallel for some distance to be abruptly narrowed again, then parallel to truncate base. Surface depressed slightly near apical border. Prementum with a sclerotized bar to which the palpigers are attached. Ligula not evidenced; a semicircular area of membranous material not differentiated into glossae and paraglossae. Labial palpi three-jointed, small; segments decreasing in all dimensions apically. Gula somewhat as in *Termitogaster* except that the posterior angles are not produced as much and the basal border is less concave.

Maxillae (Fig. 12) rather large; cardo transverse, subtrapezoidal; lacinia curved slightly, with very acute tip, very feebly ciliate if at all; galea longer, blunt at apex, inner border weakly ciliate. Maxillary palpi (Fig. 18) four-jointed; basal joint small, second joint asymmetrical, about as broad as long, third joint elongate, oval in outline, terminal segment subulate. Second and third joints with concave medial surfaces.

Pronotum slightly more than three-fourths as long as wide; a little wider than the head. Anterior border moderately bisinuate, sides evenly rounded from base to apex, posterior border feebly arcuate. Pronotum with almost entire disc depressed and feebly pigmented.

Elytra connate, approximately as long as pronotum. Inner border considerably shorter than outer, the posterior concave. Wings vestigial.

Legs slender, simple; femora, which are not appreciably flattened, and tibiae subequal. Tarsi five-jointed, fourth and fifth joints anchylosed. Fore tarsi and middle tarsi with basal joint equal to the three following joints together, that of the hind tarsi subequal to all of the other joints together.

Abdomen moderately swollen and with the sclerites separated by white, membranous material (physogastric). Abdomen apparently not recurved over thorax and head in life. Tergites transverse, fifth longer and narrower than the preceding. Inner paratergites moderately large, first four subrectangular, angles rounded, fifth elongate, triangular. Outer paratergites reduced to elongate narrow bars, the fifth entirely absent. Margin of dorsum formed by tergites not elevated. Venter convex. Sides of sternites almost straight, posterior border arcuate.

Termitoides may be distinguished from *Termitogaster* by the structure of the mentum-submentum, the size of the labial palpi and the absence of the sclerotized

ligula; by the form of the maxillary palpi (although it hardly varies from *Termitogaster insolens* more than do the palpi of other species of *Termitogaster*); by the structure of the labrum; and by the presence of the horn-like process on the front of the head. The abdomen of *Termitoides* is more slender than that of *Termitogaster* and the sclerites differ somewhat in structure; the sternites, for example, are not incised at the sides.

Termitoides marginatus, new species

Length, 3.0–4.0 mm. (with abdomen extended).

Head and thorax, in general, smoky brown, the apical half of the antennae and tarsi yellow, and the maxillary palpi darker than the other mouthparts. Sides and anterior portion of the pronotum much darker than the very light discal impressed area. Sclerites of abdomen reddish brown, membranous parts white.

Head, pronotum, and elytra finely and rather sparsely punctate and with exceedingly minute hairs. Head with a few pale setae in front of the antennal fossae and with a pair of setae near the base of the labrum and several finer hairs on each side of labrum. Pronotum with an oblique row of four setae on each side along the slightly elevated area lateral to the impressed disc. Elytra with one seta on the lateral border.

First four visible tergites with a row of twelve semi-erect setae on the posterior border; third with a subapical row of four erect setae; fifth with a row of four setae in the middle; sixth bearing a subapical row of four; seventh with two apical and two subapical setae. In addition, the tergites rather densely clothed with fine, suberect hairs. Inner paratergites with four setae, outer ones with two.

First sternite with a basal row of four setae, a middle row of four and an apical row of twelve setae; sternites two to four with a basal row of eight and an apical row of fourteen setae; fifth sternite with basal row of eight and an apical row of ten setae; the sixth bearing an apical row of eight setae.

HOST.—*Nasutitermes* (*N.*) *peruanus* (Holmgren).

HOLOTYPE.—Hac. de Santo Domingo, Ecuador (No. 289), July 17, 1936. PARATYPES.—Six collected at type locality from one termite colony (No. 402), August 22, 1936, and five from another colony (No. 328), August 15, 1936.

NEOTERMITOGASTER, NEW GENUS

GENOTYPE.—*Neotermitogaster colonus*, new species.

Head and thorax moderately slender, abdomen strongly dilated. Head (Fig. 29) approximately as wide as long; sides feebly rounded, hind angles rounded into the slightly arcuate base. Vertex feebly impressed between the eyes, front slightly convex. Anterior border of the front (postclypeus) slightly emarginate medially. Anteclypeus membranous, short, with anterior border slightly arcuate. Labrum moderately long, with rather deeply emarginate anterior border; sclerotized only on side near border. Eyes moderate in size, ovoid, slightly angulate posteriorly; finely facetted. Mandibles (Fig. 36) broader than those of *Termitogaster*. Right mandible with a single median, blunt tooth, and the left mandible with a broader tooth which is twice as broad as that of the right mandible. Mandibles densely punctate on the basal half.

Antennae rather stout, strongly geniculate. Scape nearly as long as the four following joints together, becoming thicker apically. Joints two to ten subcylindrical, wider than the scape. Second segment slightly more than three-fourths as long as the third and subequal to segments four to seven. Joints eight to ten a trifle shorter than the preceding ones. Terminal segment elongate, ovate more than twice as long as ten.

Mentum and submentum fused into a single sclerite shown in figure 9. The anterior border semicircularly emarginate medially and obliquely truncate lateral to the emargination; the sides sinuate, the greatest width of the sclerite about in the middle. Basal border strongly arcuate. Prementum largely membranous, with a sub-basal bar and ligula sclerotized. Paraglossae not distinct. Labial palpi three-jointed, joints subequal in length, decreasing in width. Gula moderate in size, posterior angles produced laterally, similar to that of *Termitogaster*.

Maxilla (Fig. 11) with cardo rather large, subtriangular, lacinia curved, slender, terminating in a sharp point; with a few dentiform setae near tip and a very dense brush of fine hairs along basal three-fourths of inner border. Galea slightly longer than the lacinia and overlapping it dorsally; the inner border with a dense brush of long, fine hairs. Maxillary palpi (Fig. 19) four-jointed. First joint small, second segment large, transverse, moderately arcuate, third joint elongate, suboval in outline, fourth joint moderately long, subulate. Second and third segments flattened, the inner surface concave, the outer slightly convex.

Pronotum as wide as the head; a little wider than long; moderately convex; sides evenly and rather strongly deflexed. Anterior border almost straight, very slightly emarginate laterally. Sides straight, but converging slightly at base; posterior border straight. All angles rounded. Pronotum with a transverse impression, which deepens at each side into a prominent, crater-like pit and with a more shallow elongate pit in the median line. Prosternum transverse, anterior border straight.

Elytra contiguous throughout; as wide as the pronotum but somewhat shorter (sutural length is a little more than one-half the pronotal length). The posterior border of the elytra is deeply emarginate so that the sutural length is about four-fifths that of the sides.

Abdomen strongly inflated, the sclerites separated by white membrane. Abdomen normally in horizontal position and apparently is not curved over thorax and head. Tergites one to four subequal in length. Fifth tergite longer than the fourth, posterior border slightly bisinuate; sixth tergite strongly arcuate posteriorly. Inner paratergites approximately one-seventh the width of the tergites; outer ones slender, only about one-third as wide as the inner. Last pair of paratergites partially fused at the middle; the inner one of the pair is strongly attenuated posteriorly.

Neotermitogaster differs from *Termitogaster* in the shape and pilosity of the mentum; the size and dentition of the mandibles; the sclerotization of the labrum; the punctation of the body; and in the fusion of the last pair of paratergites. The sternites are strongly incised on the sides as in *Termitogaster*. It appears as if this genus is the most closely allied to *Termitogaster* of any described in this paper.

Neotermitogaster colonus, new species

Length, 3.0–4.0 mm. Head and thorax fuscous; abdominal sclerites brown; apical half of antennae and the tarsi testaceous. Strongly shining.

Head, pronotum, elytra and abdominal sclerites finely punctate. The punctures are arranged in rather dense groups, especially around setigerous punctures. Elsewhere the punctation is sparse. The front of the head with seven rather coarse setae arranged in a transverse row of three along the apical border and a row of four in front of the antennae. There is one seta in the median line on the vertex. In addition, the front, occiput and sides of the head bear numerous shorter finer hairs.

The pilosity of the pronotum is as follows: eight rather stout setae on the anterior border (the median six longer), six on the disc in two longitudinal rows. Numerous fine, suberect pale hairs are present, in addition. Elytra with one seta about midway on the lateral border, and one on the disc close to the anterior border. The elytra are practically glabrous, with only a few fine hairs restricted to a narrow area just behind the pronotum.

Tergites with erect setae arranged as follows: one to five with a subapical row of four, and two to four with an additional basal row of four; six with a apical row of four and a basal row of two setae. Tergites one to four bearing an additional row of twelve to sixteen recumbent, pale bristles on the posterior border. Inner and outer paratergites (with exception of first pair) with one seta on the outer border. Sternites with numerous erect setae arranged in irregular fashion on the first and fifth and in three rows on the others.

HOST.—*Nasutitermes* (*N.*) *peruanus* (Holmgren).

HOLOTYPE.—Hac. de Santo Domingo, Ecuador (No. 328), August 15, 1936. PARATYPES.—Twelve from one termite colony (No. 289), July 17, 1936, and two from another colony (No. 402), August 22, 1936. The termite colonies, at the type locality, were the same from which *Termitoides marginatus*, n. sp. were taken.

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